

## **06. Heritability estimation**

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1. Biomass were measured in five full-sib families. Please estimate the narrow-sense heritability under the assumption that dominance effect and common environment effect are absent.
2. Yield were measured in a nested mating design (North Carolina design I (NCI)) population. Please estimate the narrow-sense heritability.
3. Blood pressure were measured in a set of samples of one parent and one offspring. Please estimate the narrow-sense heritability under the assumption of male-offspring design.
4. Blood pressure were measured in a set of samples of two parents (father and mother) and one offspring. Please estimate the narrow-sense heritability.
5. Yield were measured in three inbreed lines (assume all genotypes are independent and without pedigree information) in two environments and each environment with two replicates. Please estimate the broad-sense heritability based on variance components.